

How to build GEOS-5 (AGCM)

Did you check out a copy of the code? If not, see [How to get GEOS-5 \(AGCM\) code](#).

Instructions for DISCOVER.

Set Module Environment (preferably within .cshrc or .login) and follow these steps:

on DISCOVER:

```
module purge
module load comp/intel-9.1.052
module load mpi/impi-3.2.011
module load lib/mkl-9.1.023
module load tool/tview-8.2.0.1
setenv BASEDIR
/discover/nobackup/projects/gmao/share/dao_ops/Baselibs/v3.1.5-build1
setenv LD_LIBRARY_PATH $LD_LIBRARY_PATH
${BASEDIR}/$ARCH/lib
setenv GEOSUTIL <PATH OF GEOS
INSTALLATION>/src/GMAO_Shared/GEOS_Util
```

Instructions for NAS systems (COLUMBIA).

```
module purge
module load intel-comp.8.1.034
module load mpt.1.16.0.0
module load scsl.1.5.1.1
setenv BASEDIR /u/trayanov/baselibs/v2_2rp2
setenv LD_LIBRARY_PATH $LD_LIBRARY_PATH
${BASEDIR}/$ARCH/lib
setenv GEOSUTIL <PATH OF GEOS
INSTALLATION>/src/GMAO_Shared/GEOS_Util
```

Now, on either machine, issue the install command:

```
cd <PATH OF GEOS
INSTALLATION>/src
gmake install
```

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gmake install will build the GEOSgcm.x executable under

<PATH OF GEOS INSTALLATION>/src/Applications/GEOSgcm_App and install it (as well as other ancillary files) under <PATH OF GEOS INSTALLATION>/Linux/bin. Note that dependencies are generated during the build process, which may reduce recompilation times after changes are made to the code.

NOTE

Sometimes it may be desirable to compile with other options other than the default (as given by "gmake install"). These additional options can be specified on the command line as follows:

```
gmake install FOPT=
"<options>"
```

where <options> can be,

```
for
debugging:
-g -traceback
i.e.
gmake install FOPT =
"-g -traceback"
```

For other options see "ifort --help"

[Next: The GEOS-5 build system](#)

[Previous: How to get GEOS-5 \(AGCM\) code](#)

[Up to: Building and Installing the GEOS-5 AGCM](#)

[Return to: GEOS-5 AGCM User's Guide](#)